

CLAIMS

What Is Claimed Is:

1. Fexofenadine hydrochloride characterized by a PXRD pattern with peaks at about 4.7, 9.3, 17.4, 18.2, 19.4, 19.6, 21.6 and 24.0 ± 0.2 degrees two theta.
2. The fexofenadine hydrochloride of claim 1 having a PXRD pattern substantially as depicted in Fig. 6.
3. Fexofenadine hydrochloride Form IX.
4. A fexofenadine hydrochloride MTBE solvate.
5. A fexofenadine hydrochloride Form IX-MTBE solvate.
6. A fexofenadine hydrochloride MTBE solvate characterized by a DTG profile with endotherms at about 100°C and about 125°C.
7. A fexofenadine hydrochloride cyclohexane solvate.
8. A fexofenadine hydrochloride Form IX-cyclohexane solvate.
9. A fexofenadine hydrochloride cyclohexane solvate by a DTG profile with endotherms at about 99°C to about 110°C and about 140°C to about 150°C.
10. A process for preparing fexofenadine hydrochloride Form IX comprising the steps of:
 - a) preparing a solution of fexofenadine hydrochloride in acetone;
 - b) adding the solution to an anti-solvent selected from the group consisting of MTBE and cyclohexane to form a precipitate; and
 - c) separating the precipitate as a solvate of the anti-solvent used.
11. The process of claim 10, further comprising drying the solvate.
12. A process for preparing fexofenadine hydrochloride Form IX comprising the steps of:
 - a) preparing a solution of fexofenadine hydrochloride in ethanol;
 - b) adding the solution to an anti-solvent selected from the group consisting of MTBE and cyclohexane to form a precipitate; and

- c) separating the precipitate as a solvate of the anti-solvent used.
- 13. The process of claim 12, further comprising drying the solvate.
- 14. A pharmaceutical composition comprising:
 - a) fexofenadine hydrochloride selected from the group consisting of Form IX-MTBE solvate and Form IX-cyclohexane solvate; and
 - b) a pharmaceutically acceptable excipient.
- 15. A unit dosage of the pharmaceutical composition of claim 14 containing about 30 to about 180 mg of fexofenadine hydrochloride.
- 16. A method of inhibiting binding between an H₁ receptor and histamine in a mammal comprising administering the pharmaceutical composition of claim 14 to the mammal.